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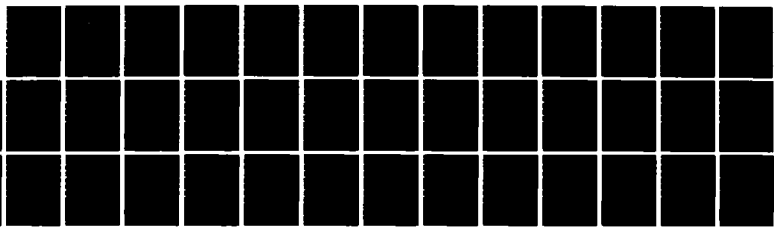
AN ANALYSIS OF THE UNITED STATES AIR FORCE AND ARMY  
LOGISTICAL DOCTRINES F. (U) AIR COMMAND AND STAFF COLL  
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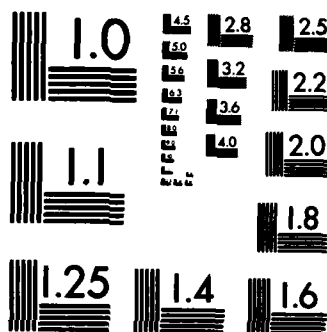
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# AIR COMMAND AND STAFF COLLEGE

## STUDENT REPORT

An Analysis of the United States Air Force  
and Army Logistical Doctrines for Conducting  
the Air Land Battle (ALB).

MAJOR WILLIAM R. HYDER

85-1285

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**REPORT NUMBER** 85-1285

**TITLE** AN ANALYSIS OF THE UNITED STATES AIR FORCE AND ARMY LOGISTICAL  
DOCTRINES FOR CONDUCTING THE AIR LAND BATTLE (ALB).

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Submitted to the faculty in partial fulfillment of  
requirements for graduation.

AIR COMMAND AND STAFF COLLEGE  
AIR UNIVERSITY  
MAXWELL AFB, AL 36112



## REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS		
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION/AVAILABILITY OF REPORT		
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE					
4. PERFORMING ORGANIZATION REPORT NUMBER(S) 85-1285			5. MONITORING ORGANIZATION REPORT NUMBER(S)		
6a. NAME OF PERFORMING ORGANIZATION ACSC/EDCC		6b. OFFICE SYMBOL (If applicable)		7a. NAME OF MONITORING ORGANIZATION	
6c. ADDRESS (City, State and ZIP Code) Maxwell AFB AL 36112			7b. ADDRESS (City, State and ZIP Code)		
8a. NAME OF FUNDING/SPONSORING ORGANIZATION		8b. OFFICE SYMBOL (If applicable)		9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
8c. ADDRESS (City, State and ZIP Code)			10. SOURCE OF FUNDING NOS.		
			PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.
11. TITLE (Include Security Classification) AN ANALYSIS OF THE UNITED STATES AIR FORCE					
12. PERSONAL AUTHOR(S) Hyder, William R. , Major, USA					
13a. TYPE OF REPORT		13b. TIME COVERED FROM _____ TO _____		14. DATE OF REPORT (Yr., Mo., Day) 1985 April	
				15. PAGE COUNT 38	
16. SUPPLEMENTARY NOTATION ITEM 11: AND ARMY LOGISTICAL DOCTRINES FOR CONDUCTING THE AIR LAND BATTLE (ALB).					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB. GR.			
19. ABSTRACT (Continue on reverse if necessary and identify by block number) The analysis was conducted using unclassified sources to determine if broad doctrinal interface existed. The analysis substantiates the need for joint conduct of the Air Land Battle (ALB) through a description of the expected Soviet tactics and a discussion of how ALB will be conducted. Air Force Manual 400-2, <u>Air Force Logistics Doctrine</u> and US Army Field Manual 100-5, <u>Operations</u> , were evaluated to determine if complementary logistical doctrine and implementing principles existed. The analysis was conducted using the applicable Air Force logistical principles and corresponding Army logistical concepts/requirements for ALB execution. The analysis concluded the logistical doctrine of the Air Force does complement Army requirements for the conduct of ALB. However, the analysis also revealed two areas of concern which have a potentially negative impact on ALB tactical execution. These two concerns are: a need for increased doctrinal emphasis on the reliability of major weapon systems and the need for an ALB unique push system of distribution/resupply.					
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input checked="" type="checkbox"/> DTIC USERS <input type="checkbox"/>			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED		
22a. NAME OF RESPONSIBLE INDIVIDUAL ACSC/EDCC Maxwell AFB AL 36112			22b. TELEPHONE NUMBER (Include Area Code) (205) 293-2483		22c. OFFICE SYMBOL

## PREFACE

The growing threat imposed by the massive Soviet military has been of major concern to the United States since the end of World War II. The United States military relied on a strong nuclear arm to deter Soviet aggression for over 30 years. The nuclear factor is still essential to our overall defense effort. However, the possibility of conventional confrontation is still probable. The Soviet Union and the other Warsaw Pact forces represent a large and modern military threat to the security of Europe. This threat poses a substantial tactical problem to the United States and its NATO allies. How to fight outnumbered and win? The western allies have approached this problem from a qualitative standpoint. The use of high technology weapons coupled with revolutionary joint tactics, to capitalize on threat weaknesses, are the cornerstones of Air Land Battle (ALB) doctrine. This study evaluates the logistical doctrinal impacts on ALB. Without logistical support the ALB cannot be successfully executed. Also, each service's logistical doctrine must complement not only the ALB, but the requirements of the other service. It was conducted as an unclassified Staff Problem Solving project for the Air Command and Staff College and is intended to evaluate logistics from a doctrinal view. Special thanks is given to LTC Dave Rutenberg, ACSC Logistics Curriculum Manager and Maj John "Duck" Dorough, ACSC Warfare Studies, for their support and guidance.

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## EXECUTIVE SUMMARY

Part of our College mission is distribution of the students' problem solving products to DoD sponsors and other interested agencies to enhance insight into contemporary, defense related issues. While the College has accepted this product as meeting academic requirements for graduation, the views and opinions expressed or implied are solely those of the author and should not be construed as carrying official sanction.

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**REPORT NUMBER** 085-1285

**AUTHOR(S)** WILLIAM R. HYDER, MAJOR, USA

**TITLE** An Analysis of the United States Air Force and Army Logistical Doctrines for Conducting the Air Land Battle (ALB).

I. **PURPOSE:** To determine if the United States Air Force and Army logistical doctrines sufficiently complement each other to successfully execute the Air Land Battle in the European theater.

II. **PROBLEM:** The conduct of the deep attack is essential to the tactical execution of Air Land Battle (ALB) doctrine. Ground forces are responsible for the containment of attacking first echelon Soviet forces and for attacking follow-on forces within their capability. Air forces are responsible for conducting the attack on deep follow-on forces to destroy forces and disrupt Soviet operational timetables. This joint effort is offensive in nature and takes the initiative away from the Soviets. The increased reliance on logistical support is essential to conducting this offense-oriented doctrine. If logistics doctrine of the partner services do not complement each other the tactical doctrine can not be executed.

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## CONTINUED

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III. DISCUSSION of ANALYSIS: The analysis was conducted using unclassified sources to determine if broad doctrinal interface existed. The analysis substantiates the need for joint conduct of the ALB through a description of expected Soviet tactics and a discussion of how the ALB will be conducted. This also serves as the vehicle to describe the ALB environment and the reliance on logistical support. Air Force Manual 400-2, Logistics Doctrine, and US Army Field Manual 100-5, Operations, were evaluated to determine if complementary logistical doctrine and implementing principles existed. Field Manual 100-5 is the Army doctrinal manual for the conduct of Air Land Battle. The analysis was conducted using the applicable Air Force logistical principles and corresponding Army logistical concepts/requirements for ALB execution.

IV. CONCLUSIONS: The analysis concluded the logistical doctrine of the Air Force does complement Army requirements for the conduct of Air Land Battle. However, the analysis also revealed two areas of concern which have a potentially negative impact on ALB tactical execution. These two concerns are: a need for increased doctrinal emphasis on the reliability of major weapon systems and the need for an ALB unique push system of distribution/resupply. These concerns are crucial to ALB execution because of the expected threat tactics and the offensive character of ALB.

V. RECOMMENDATIONS: The Air Force and Army must emphasize reliability in future weapon system acquisition. The expected ALB environment should be used in developing future military system performance requirements. Also, Unified and Specified Commanders should be given the operational latitude to convert to a push system of distribution/resupply, for both services, when the strategic or tactical situation warrants. However, this will require support from the Department of Defense to ensure resources are available to initiate and maintain such a conversion. Analysis should continue in both areas of concern in order to develop the principles and concepts required to execute these doctrinal recommendations.

## Chapter One

### Introduction

The increased scope and complexity of operations, the accelerated tempo of battle and the rapid change in technology represent quantum change. Today's divisions must tomorrow operate like yesterday's corps. Today's battalion commanders must think like yesterday's generals. And today's logisticians must be bolder and more creative than their forebearers in order to maintain and resupply the fighting forces (5:25).

General William R. Richardson, Commander of the United States Army Training and Doctrine Command, made this statement as part of his address as the 1984 Kermit Roosevelt Lecturer to the United Kingdom. General Richardson expressed, in these few words, the rethinking and reorientation required of today's military leaders. The successful execution of current Air Land Battle (ALB) doctrine is essential to fighting outnumbered and winning. The expected increased tempo of operations and the reliance on advanced technology systems will also cause an increased logistics burden on the conduct of the ALB. This study will address General Richardson's challenge to today's logistician.

### Objectives of the Study

The purpose of this study is to determine if United States Air Force (USAF) and United States Army (USA) logistical doctrines sufficiently complement each other to successfully execute the Air Land Battle. This study will not evaluate the tactical merits of the ALB doctrine. However, it will address the evolution and implementation of ALB doctrine in order to establish a common foundation for the analysis of logistical doctrine considerations. It will present a view of the threat environment with emphasis on the expected logistical requirements. The study will also determine if current service initiatives are adequately addressing those logistical problems which may impact the successful execution of the ALB. Finally, the study will recommend doctrinal changes, as required, to strengthen the interservice aspects of logistical doctrine.

### Significance of the Work

There are three primary reasons for investigating the extent of interface between the two service logistical doctrines. First, the likelihood of either service fighting any war alone is very slim. In fact, the very heart of ALB doctrine emphasizes the need to interact as a single team to achieve objectives. Therefore, any doctrinal differences will be amplified to a point which could jeopardize the successful accomplishment of intended purposes. The presence of significant logistical differences could subsequently cause inefficient execution of either or both service's portion of

the ALB. Second, logistics is by nature oriented towards materiel. The stuff of war is essential. The current emphasis on applying advanced technology to war materials, has resulted in expensive and limited resources. The efficient use of these limited resources is paramount when we are fighting outnumbered. Finally, the increased reliance on interservice cooperation has placed a greater emphasis on the logistical implications of warfare. Commanders have habitually expected the logisticians to support any and all tactical schemes. Logisticians have traditionally accepted their unglamorous roles and have accepted and even perpetuated this expectation from their commanders. The commander of today, especially the ground commander, will have to place more emphasis on logistics and its role in the tactical scheme. Therefore, any doctrinal differences must be surfaced now and solutions must be found and implemented. "The big questions of policy should first be settled as well as those of command, strategy, tactics, logistics and materiel. Then from such decisions minor doctrines may be reasoned to flow logically and consistently so that all parts of the grand scheme will be consistent and harmonious" (7:23).

### Scope

This study will not attempt to develop detailed conclusions or recommendations. It will evaluate the broad doctrinal concerns both services should address. Any detailed implementing principles should follow from this broad doctrinal analysis.

### Methodology

Chapter Two will describe the Soviet Military threat that can be expected in the European theater.

Chapter Three will build an awareness of how and why the Air Land Battle doctrine was developed and how it will be fought. This will set the stage for and establish how important logistical concerns will be to the successful execution of the ALB.

Chapter Four will address the extent USAF and USA logistical doctrines complement the ALB. USAF manuals and USA Field Manual 100-5 will be the vehicles for this comparison.

Chapter Five will evaluate the extent of on-going programs to reduce or eliminate doctrinal differences and propose doctrinal changes to enhance the conduct of the Air Land Battle.

## Chapter Two

### Soviet Threat

Black Horse One Zero, Black Horse One Zero, this is Shovel Six, Confirming Charlie One's sighting as follows: large armored formation passed through inter-German border Zero Three Zero Five Zulu approximate brigade size. Composed of Papa Tango 76s, Bravo Tango Romeo 62s, and Tango 72s. Inform Black Horse Six that Shovel is engaging. Out. Captain Jack Langtry, Troop Commander, Troop L, 3 Squadron in 11 Armored Cavalry Regiment was speaking into this microphone early on the morning of 4 August 1985 as he stood on hill 402 at Wildeck, looking across the border zone over the hills rolling toward East German Eisenach. In the dawn light he saw columns of armored vehicles moving rapidly towards him on both sides of the autobahn. Langtry knew what it was. The advanced guard of an attacking Soviet formation (1:3). The Third World War August: 1985

### Soviet Military Emphasis

The Soviet's Great Patriotic War instilled, in Soviet military leadership, an awareness that future military conflicts must be characterized by two guiding principles. These doctrinal principles are the essentiality of the offense and the use of surprise. The Soviets view the complete defeat of an enemy as paramount. Only a massive war machine tuned to offensive thought and action will achieve the necessary total defeat. The principle of surprise is essential because it immediately places the defender off balance and tends to counter any perceived or real advantage he may possess (12:--).

Conventional Soviet military doctrine emphasizes the cardinal principle of concentration of forces, at the decisive location at the crucial time. This principle's main component is a quantitative superiority of both men and weapon systems. The concentration of forces is habitually employed in conjunction with offensive thought and surprise. The Soviet application of the principle of concentration of forces has two major objectives: the breaching of defensive positions and the subsequent exploitation of those breaches by massive, armor-heavy forces. The exploitation, if successful, will destroy the enemy before he can maneuver to subsequent defensive positions or reinforce the situation. Logistical centers, lines of communication, airfields and nuclear weapons delivery systems are all objectives for the attacking forces. These attacking forces are also characterized by their reliance on massive artillery fires and covering support provided by tactical aircraft. All these forces move under the protective umbrella of supporting organic antiaircraft defense systems.

The only major differences between Soviet conventional and nuclear ground



warfare doctrine are the obvious use of nuclear supporting fires and a lessened reliance on large combat formations. The nuclear fires are used to destroy defensive positions and units, nuclear delivery systems and logistical centers. However, the exploitation of these fires is carried out by conventional maneuver forces. Soviet and other Warsaw Pact ground forces are equally well suited and trained to function in either a conventional or nuclear environment. This chapter will primarily deal with conventional conflict. Since Soviet military doctrine is the guiding doctrine employed by the Warsaw Pact, this analysis will orient on the Soviet view of how their doctrine is applied. Soviet doctrine maintains that nuclear weapons are considered the main source of destruction. The Soviets do not rely exclusively on conventional or nuclear warfare, but could commence or maintain future conflicts with either. They have built a massive ground and air threat which capitalizes on the hard learned lessons of World War II (12:--).

#### Soviet Ground Force Echelonment

To insure the momentum of offensive combat missions and to provide for contingencies, Soviet attack formations are "echeloned", usually in the form of a first echelon, a second echelon, and a reserve. This grouping is considered "normal" from the regimental level upward . . . [The referenced to upward means all the way up to and including Front Armies.] . . . The first echelon. . . is the main attack force. The second echelon has no U.S. equivalent. Its primary purpose is to maintain the momentum of the attack especially on the main axis of attack. . . . The second echelon is initially tasked to reach the same objective as the first echelon, should assistance be required. The second echelon remains in tactical march column until it is committed (12:3-12).

The vehicular composition of a Warsaw pact *Motorized Rifle Division* (MRD) is shown in Table 3. The MRD is the most versatile of Warsaw Pact combat units. It is nominally dispersed, during a tactical road march, from front to rear for 100 kilometers (km), with a frontage of 15-25 km. The regiments of the MRD can each occupy 28-50 km of road space. The distance between lead elements of the attacking first echelon regiments and the lead elements of the following second echelon is approximately 60 km. At the normal cross country speed of 15 km per hour it would take approximately four hours to bring the second echelon units into the attack. Soviet doctrine places great emphasis on these distances which are vital elements of march discipline and control. Commanders carefully plan, time and rehearse the movement of large units and compliance to these movement plans is rigid. The number of routes available for movement from assembly areas to attack positions dictate the number and type of combat organizations assigned to those routes. Meticulous planning attention is given to speed versus terrain considerations and the time required to move from control point to control point along the route of march. These timing measures are essential elements of command and control. The lack of radios, maps and leadership initiative, in the combat organizations, have resulted in an almost total reliance on rigid movement command and control measures. These elements of normal western command and control have been sacrificed, in part, due to the quantitative approach Soviet leadership has taken in weapon system acquisition. Such control measures are considered unnecessary by Soviet standards and more emphasis is placed on acquiring more combat power which is simpler to operate and maintain. Therefore, Soviet and subsequently the Warsaw Pact leadership only provide such equipment at the higher

levels of command. The command and control of subordinate units is accomplished by strict adherence to time tables, rigid formations and rehearsal. The elements of timing and spacing take on a greater significance. They are meticulously planned for all units from the leading battalions back through the various echelons of the Front Armies. These distances and times of the Front Armies equate to thousands of kilometers and several days in time (12:--). Therefore, any disruption or deviations from the planned route/time could cause a piling-on effect by the following units and echelons. Also, any gaps caused by the destruction of following units or echelons will remain as gaps in the overall Front dispersion. The Warsaw Pact command and control systems do not accommodate the speeding up of units to fill in or replace lost units, at least not in a timely fashion. This destruction of follow-on units, particularly second echelon units, before they are committed, and the continuous attack of following deep units will cause massive command and control problems. The subsequent destruction of the follow-on forces will result in ever increasing gaps in units and time. These gaps will disrupt the tempo of the attack and reduce the ability to concentrate forces without substantial delays. The disruption will be devastating when such attacks are carried out against threat forces across both front and depth. This concept is the key to tactical execution of the ALB. This attacking of the deep follow-on echelons, while simultaneously attacking and isolating the committed first echelons, causes the gaps needed by NATO to provide the opportunity to reinforce, resupply and commence offensive operations.

#### Ground Forces

Since the likelihood of a European conflict with only Soviet forces is remote, a discussion of the overall Warsaw Pact threat is called for. "The expected Warsaw Pact conventional ground forces in position for potential use against the North Atlantic Treaty Organization (NATO) forces are depicted below" (14:85):

Table 1

#### Ground Force Comparison

<u>Type Force</u>	<u>Warsaw Pact</u>	<u>NATO</u>
Personnel (millions)	4	2.6
Divisions	173	84
Main Battle Tanks	42,500	13,000
Anti Tank Missile Launchers (Crew Served or Mounted)	24,300	8,100
Artillery/Mortars/Rocket Launchers (100mm and Larger)	31,500	10,750
Armored Personnel Carriers and Infantry Fighting Vehicles	78,000	30,000

### Air Forces

The expected Warsaw Pact air force assets in position for potential use against NATO are depicted below (14:83):

Table 2

#### Air Force Comparison

<u>Type Aircraft</u>	<u>Warsaw Pact</u>	<u>NATO</u>
Fighter/Bomber	1920	2525
Interceptor	4370	614
Reconnaissance	600	350

## Ground Force Organizations

The following table depicts the normal composition of selected Warsaw Pact ground forces (12:2-9):

Table 3

### Summary of Major Items of Equipment

*The reader is cautioned that this table is provided only to highlight the dimensions of tactical ground force organizations and their capabilities. The accuracy of the information is perishable and it does not constitute a valid basis for order of battle analysis.*

EQUIPMENT	DIVISION		REGIMENT		BATTALION	
	MR	TK	MR	TK	MR	TK
<b>ARMORED VEHICLES</b>						
MEDIUM TK	255	325	40	95	—	40/31
LT TK/BMP	19	19	3	3	—	—
APC/ICV	311	133	100	11	31	—
ARMORED VEHICLE (BRDM)	71	65	3	9	—	3
<b>ARTILLERY</b>						
122 HOW TOWED/SP	54	60	6	—	—	—
152 HOW TOWED/SP	18	—	—	—	—	—
MULTIPLE ROCKET LAUNCHER	18	18	—	—	—	—
FROG 7	4	4	—	—	—	—
120mm MORTAR	54	18	18	—	6	—
<b>AIR DEFENSE</b>						
57mm GUN S-60	24	24	—	—	—	—
ZSU 23-4	16	16	4	4	—	—
SA-9	16	16	4	4	—	—
SA-7	112	36	36	—	9	—
<b>ANTI-TANK</b>						
100mm GUN T-12	18	—	—	—	—	—
73mm RECOILLESS SPG-9	18	6	6	—	2	—
ATGM (MANPACK)	18	6	6	—	2	—
ATGM (BRDM)	27	9	9	—	—	—
AT GRENADE LAUNCHER	260	93	81	—	27	—
<b>ENGINEER</b>						
TANK LAUNCHED BRIDGE (MTU)	10	14	1	3	—	—
FOLDING BRIDGE (TMM)	20	14	1	3	—	—
FERRY (GSP)	12	12	—	—	—	—
PONTOON (PMP)	18	18	—	—	—	—
<b>TOTALS FOR AIRBORNE DIVISION</b>						
122mm HOWITZER	18	—	—	—	SP ASSAULT GUN ASU 57/85	30
120mm MORTAR	18	—	—	—	85mm GUN SD 44	18
MULTIPLE ROCKET LAUNCHER	18	—	—	—	ATGM (MANPACK)	27

MR-Motorized Rifle  
TK-Tank

## Anti Aircraft Defense Forces

The offensive nature of Soviet doctrine and its reliance on massive mechanized forces has resulted in a corresponding need for large numbers of anti-aircraft defense systems. The need for a protective umbrella, provided by these systems, is instrumental to maintaining the required offensive tempo. Unlike NATO, the Soviets have placed a higher priority, or at least a more timely priority, on these systems. The estimate of available Soviet anti-aircraft gun systems was 7,900, in 1983. Surface-to-air missile systems are estimated at over 17,000 (14:69,73,75). These anti-aircraft systems provide the umbrella which is so important to Soviet and Warsaw Pact military operations.

Tables 1 and 3 depict the large quantities of major items available to the Warsaw Pact ground forces and present the largest threat to NATO. Table 2 provides an appreciation of the air threat, but does not address the growing fleet of helicopters available for the conduct and support of the Soviet's offensive oriented doctrine. These tables are presented to provide a general appreciation for the varied types of threat targets and the enormity of the ground threat. Other reference materials can provide a deeper appreciation for the large numbers of supporting vehicles, equipment and organizations, so vital to supplying the offensive doctrine.

The quantitative view of the ground threat facing NATO, as a single factor, is impressive. The Soviets also are placing more emphasis on quality weapon systems. This new emphasis is driven by a pressing concern to avoid being technically outmaneuvered by the West. The Soviets recognize that qualitative weapon advances tend to reduce quantitative advantages as a factor of deterrence. They want to close this gap with the West. However, their massive array of modern weapon systems does present command and control difficulties. Soviet command and control relies heavily on stifled initiative, conformity to precise well-rehearsed operations and rigid echelonment of forces. These measures are essential elements of their military doctrine. The knowledge of these control measures is instrumental to the successful execution of the Air Land Battle.

The next chapter will discuss how the Air Land Battle will be conducted and how it capitalizes on the weakness of Warsaw Pact command and control and the echelonment principle.

## Chapter Three

### Evolution of Air Land Battle Doctrine

Doctrine: Fundamental principles by which the military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgement in application. . . . Aerospace doctrine is a statement of officially sanctioned beliefs and warfighting principles which describe and guide the proper use of aerospace forces in military action. . . . Aerospace doctrine is an accumulation of knowledge which is gained primarily from the study and analysis of experience (8:v).

An Army's operational concept is the core of its doctrine. It is the way the Army fights its battles and campaigns, including tactics, procedures, organizations, support, equipment, and training. The concept must be broad enough to describe operations in all anticipated circumstances. Yet it must allow sufficient freedom for tactical variations in any situation (11:2-1).

The evolution and subsequent changes in military doctrine were the result of the lessons learned from past conflicts (15:--). Conflict provides the testing ground for doctrine and tactics. It enables the doctrinal planner to see what worked and what did not. Technology has been a driving force behind doctrinal changes. However, technology often only provides a different tool to implement or counter a doctrinal change. The machine gun's impact on warfare, during World War I, was viewed as a counter to the concept of concentration of forces. The execution of Blitzkrieg, or lightning war, by the Germans in World War II was viewed as the first effective use of combined arms. This efficient use of modern armor and aircraft, in a coordinated manner, generated a rethinking of Allied tactics. The impact of the lessons learned from World War II were of significant import to military doctrine for many years. The lessons the allies gleaned from the German campaigns in Poland, France and Russia were quickly applied to our World War II doctrine. Those changes were quickly accepted because the Germans proved the merits of Blitzkrieg by defeating their enemies. However, peacetime doctrinal changes without benefit of actual combat testing have few advocates.

The post-World War II years found the United States as the sole possessor of nuclear weapons. These weapons caused a stagnation of military thought among Western military leaders. Nuclear weapons became essential to doctrine execution. The large and ever growing conventional threat from the Soviets was to be countered by these nuclear weapons. The Soviets used their numerical superiority in ground and air forces as their principal threat, until they became nuclear capable. But, the Soviets also continued with the expansion of their ground and air forces as their major modernization factor. The West, the United States in particular, realized a quantitative deterrence was not acceptable. We proceeded with the development of a qualitative deterrent force structure. Recognizing the reality of the massive Soviet

threat we proceeded to counter it with firepower and high technology equipment. Technology was and remains a major contributor to our doctrine execution and a testing ground--Viet Nam became available (15:--).

The Viet Nam experience provided the US military leadership with the opportunity to evaluate the performance of high technology weapon systems and command and control measures. It also produced the realization that future conflicts would require increased inter-service cooperation. High technology warfare would demand improved command and control and a heavier reliance on the logistics community, but our basic conventional warfare doctrine remained relatively unchanged. The US did make great strides in the conduct of non-conventional warfare, but maintained its heavy reliance on nuclear weapons to counter the still growing conventional Soviet threat in Europe.

The Viet Nam conflict provided US military leaders the first opportunity to incorporate high technology into warfare. They conducted inter-service operations on a continuous basis, but the battlefield became the most important lesson learned. Viet Nam instilled a non-linear view of the battlefield. The ability to think in all directions, to position forces at critical points and capitalize on enemy weaknesses surfaced in our post Viet Nam doctrine (15:--). The visualization that deep attacks in the enemy rear could assist the battle in other areas became evident. High technology gave the battlefield commander the capability to see the battlefield in almost real time and he had the weapons to influence what he saw. Our withdrawal from the tangled web of Viet Nam necessitated a reorientation back to Europe. We found the Soviet threat had continued to grow and realized that the reliance on technology alone would not counter it and nuclear weapons use was undesirable.

The military community went through a doctrinal search in the 1970s. What force structure and doctrine could capitalize on the lessons gained from the Viet Nam experience? The concept of a war of attrition, from World War I, was revitalized to a degree. The new doctrinal concept was to trade space for time while continuously moving our defensive lines westward. This "Mobile Defense" envisioned an attack of enemy weak points as they appeared. It was expected this technique would eventually attrit the massive Soviet threat and at best force a stalemate. Our ability to execute this doctrine, based on force ratios, was questionable at best. The Soviet threat was massive and NATO could not address it with the forces at hand. Also, this doctrine was never palatable to our European allies because they were giving up territory which might never be regained. The Mobile Defense doctrine also had an underlying defeatist implication. We were to fight the good fight, but possibly lose or only draw in the end.

The early 1980's presented a new doctrinal challenge, with the discarding of Mobile Defense. An offensive concept of fighting outnumbered and winning became essential. The post Viet Nam doctrinal evolution had incorporated many of the lessons learned, but the loss of major portions of western Europe was a high price to pay. What was needed was an aggressive and executable doctrine. The doctrine had to be based on fighting outnumbered, a lessened reliance on nuclear weapons and avoiding the loss of major portions of the battlefield. The Air Land Battle doctrine evolved as the approach to take.

As Chapter Two detailed, the Soviets rely heavily on their second echelon and other deep follow-on forces to build up the required force ratios to maintain the offense. Air Land Battle doctrine capitalizes on this Soviet reliance and exploits it as

a major weakness.

Operations based on this doctrine are non-linear battles which attack enemy forces throughout their depth with fire and maneuver. They require the coordinated action of all available military forces in pursuit of a single objective. . . .The Air Land Battle will be dominated by the force that retains the initiative and, with deep attack and decisive maneuver, destroys its opponent's ability to fight and to organize in depth. . . .The battle extends from the point of close combat to the forces approaching from deep in the enemy rear (11:1-5).

Neither US Army nor any of the NATO ground forces have the conventional weapon systems to conduct the required attacks on the enemy's deep follow-on forces. Those forces/echelons can be 72 hours and up to 100 km away from the point of contact. This fact necessitates the primary use of air power to execute the attack on the deep forces/echelons. NATO forces do have the limited capability to insert and extract limited ground forces into the enemy rear, use attack helicopters, and use mechanized forces to strike shorter distance targets. However, either contingency will require joint effort with air forces. As stated by General Eisenhower, "Experiences. . . have indicated that in many operations, if not in the majority, the task was of necessity accomplished by contributions from two or three Services acting under the principles of unified command. . . .The welding of the forces resulted in the greatest possible concentration of combat power at the decisive point while at the same time permitting the greatest economy of force" (8:2-5). A joint service approach is required to fight and win the ALB.

The Air Force is an equal partner in the air-land battle. It supports the battle with counter air and air interdiction operations, offensive air support (OAS), and tactical airlift operations. Counter air operations achieve necessary air superiority and insure that enemy air forces cannot interfere with the operations of friendly air or ground forces. Air Interdiction operations destroy, isolate, neutralize, or delay the enemy's military potential before it can influence friendly operations. OAS is that portion of offensive airpower in direct support of ground operations and consists of tactical air reconnaissance, battlefield air interdiction (BAI), and close air support (CAS) (11:7-6,7-7).

The coordinated attack by ground forces and air forces is the cornerstone of ALB tactical doctrine. It is executed as an attack on enemy weak points throughout the depth of his formations. This simultaneous assault will result in destroying enemy resources, disrupting restrictive timetables and increasing command and control problems. The battle must be taken to the enemy and must be conducted in an aggressive and devastating manner.

Numerous world trends indicate that prolonged war may be a thing of the past. Certainly, the lethality of future weapons, the decline in the US industrial base and our decreasing military age population all tend to argue against wars of a prolonged nature. The initial battle may well be so devastating that political settlement is sought early. It will be important then to be militarily ahead from the beginning to negotiate settlement from a position of superiority (13:7).



The joint conduct of the ALB is essential to the doctrine itself. Without it, NATO would most likely be forced into a limited war of attrition and vast amounts of western Europe would be lost. Worse still would be the possibility of an escalation to nuclear confrontation. "Soviet military doctrine holds that, if war breaks out in Europe, it must be won quickly by the Soviet Union if it is to be won at all. If the war drags on, there is a high risk that it will develop into a catastrophic nuclear exchange and/or that the strains of war will destroy the Soviet bloc from the inside" (4:42). ALB presents the possibility to inflict such devastation on the Soviets that a political settlement might be sought and nuclear confrontation avoided.

The tactical merits of ALB are under fire from our NATO allies and there is concern that ALB is only applicable to a European confrontation. Regardless of these concerns, ALB is current USA doctrine and it or some similar, modified doctrine will be required to overcome the Soviet threat. The reliance on joint USAF and USA execution of ALB or possible derivative will continue. ALB doctrine requires greater emphasis on conducting the deep attack. Increased requirements for air delivered munitions to service the deep targets is essential. The ripple effect of this requirement throughout the logistics system must be considered. More sorties must be flown; more spares, more personnel and more supporting bases must be expected. The logistics systems of both services must also insure that current and future weapons systems are capable of effective performance and contribution to the ALB.

Both services have unique capabilities and requirements. This study will now address the logistical doctrines of each to determine if they complement the successful execution of ALB doctrine.

## Chapter Four

### Logistics Doctrine Comparison

Strategy, like politics, is said to be the art of the possible, but surely what is possible is determined not merely by numerical strengths, doctrines, intelligence, arms and tactics, but in the first place, by the hardest facts of all: those concerning requirements, supplies available and expected, organization and administration, transportation and arteries of communication. . . .It may be that this requires, not any great strategic genius but only plain hard work and cold calculation. While basic, this kind of calculation does not appeal to the imagination which may be one reason why it is so often ignored by military histories (2:1).

Universal understanding and acceptance of common doctrines is necessary before concentrated action by a large force engaged in hostilities is possible; and an essential prelude to great success in war (7:16).

The tactical aspects of ALB clearly indicate the need for joint participation between USAF and USA components to successfully execute current tactical doctrine. However, the execution of ALB doctrine relies heavily on the logistical potential of each service to accomplish its respective portion of the tactical scheme.

To reach the ultimate goal of war efficiency we must begin with principals, conceptions and major doctrines, before we can safely determine minor doctrines, methods and rules. We must build from the foundation upward and not from the roof downwards (7:28).

The logistics component of warfare is not glamorous and is often partially neglected by the warriors. It is an element of war that, in recent United States military history, has been taken for granted. The United States' military has lived with only short-termed logistical shortages in the post-World War II years. It has also become adept at the "work around" as a way of life. The conflicts in Korea and Viet Nam were characterized by a slow build-up to a solid logistical base. This support proved to be instrumental in ultimately achieving limited tactical victories. However limited the victories, they resulted in the military execution of national policy. The logistical implications of ALB are similarly critical. The outcome may not best serve our current national interest without adequate support of our military services and full cooperation between them. The military could possibly fight outnumbered and lose or at best reach a tactical stalemate with the Warsaw Pact.

### Doctrine Evaluation

This chapter will evaluate those elements of USAF and USA logistical doctrine which relate to the conduct of ALB tactical doctrine. The comparison of logistical

doctrines will be accomplished through an evaluation of current USAF logistical doctrine as outlined in Air Force Manual (AFM) 400-2 and the USA's benchmark of ALB doctrine, Field Manual (FM) 100-5. The reader is cautioned to remember that doctrine is broad in nature and does not actually address how-to aspects.

Logistics ensures that Air Force forces have the support to train daily and the support to fight at all levels of intensity for as long as necessary to ensure victory. This logistics capability is directly tied to our force structure. Planning which provides a force structure that cannot be effectively maintained is based upon a misunderstanding of the role of logistics. Our planning process must recognize that all operations, both in peacetime and wartime, are totally dependent on logistics. . . .The experience of warfare has demonstrated the significant role of logistics in providing the necessary strength when and where it has been needed most. The critical functions of supply and maintenance have often proven to be the key to success or the cause of defeat (9:4-9).

Forward deployed forces may have to fight on a few hours' notice. Other components of the force may have only days or weeks to make final preparations for war. . . .Unit readiness cannot be a reality without logistical readiness. . . .the availability and proper functioning of material, resources, and systems to maintain and sustain operations on a fluid, destructive, and resource-hungry battlefield (11:5-1).

These excerpts from Basic Aerospace Doctrine AFM 1-1 and Field Manual FM 100-5 Operations, indicate that logistical supportability in each service, is an integral part of tactical doctrine. AFM 400-2, Air Force Logistics Doctrine, defines logistics doctrine as "A body of principles applicable to the determination of requirements for, the acquisition, distribution, and maintenance of, the resources and services integral to a military capability" (10:2-1). AFM 400-2 also describes nineteen (19) principles which are the essential elements of USAF logistical doctrine. FM 100-5, Operations, addresses in how-to-fight terms, but still in a doctrinal context, the essential concepts and requirements for ALB logistics support. A cursory comparison of the USAF principles indicates not all are directly related to the tactical aspects of ALB doctrine. However, a closer look at those which do relate is necessary to determine the extent of interface with the ALB logistical concepts. The analysis which follows will first address the USAF logistics principle, followed by the applicable FM 100-5 logistic concept/requirement. Additional information and detail can be found in the cited reference.

### The Principle of Strategic/Tactical-Logistics Relationship.

CERTAIN LOGISTICS PROCESSES ARE SO RELATED TO STRATEGIC/TACTICAL CAPABILITY THAT LOGISTICS CAPABILITY INFLUENCES STRATEGIC/TACTICAL DECISIONS: . . .The status of technology and industrial capacity influences strategy and tactics. . . .The planning for strategy, logistics and tactics must be placed in proper perspective, with the tradeoffs being command decisions (10:3-1).

FM 100-5 states, "Commanders must plan tactics and logistics concurrently to insure that the tactical scheme of maneuver and fire support are logistically supportable. . . .They modify unsupportable plans or accept the risks involved" (11:5-1).

As these citations indicate both services clearly place the proper emphasis on logistics. Logistics responsibility is placed squarely on the shoulders of the command structure. The importance of logistics supportability to strategy and tactics is crucial for the successful accomplishment of each. Commanders are, as they should be, responsible for the logistical aspects of achieving their military objectives. The doctrinal emphasis is visible and should never be lost, at any level of command.

### The Principle of the Objective.

EVERY LOGISTICS OPERATION MUST BE DIRECTED TOWARD A CLEARLY DEFINED, DECISIVE AND ATTAINABLE OBJECTIVE: . . .Its [logistics] must provide the appropriately phased requirement for personnel, material, facilities, and services that will most directly, quickly and economically accomplish its intended purpose. . . .having due regard to total resource limitations, area of operation, and the state of the art for the time period considered (10:3-2).

FM 100-5 states, The Combat Service Support (CSS) System develops and maintains maximum combat power by sustaining combat forces. AUSTERITY. Future conflicts will be intense and consume resources rapidly. Austerity will be the rule; efficiency will be mandatory. . . .When capabilities do not meet requirements, commanders must establish priorities for support. . . .REQUIREMENTS. The CSS system supports weapon systems and the soldiers who can man them. Those who direct the CSS effort insure that critical weapon systems have sufficient ammunition and fuel. . . .and that soldiers are available to operate them (11:5-1; 5-2).

The logistical support of the tactical scheme is uppermost in the attainment of desired battlefield goals. Without the required balance of men and material, tactical operations should not be undertaken. Also, once undertaken the factor of sustainment, until objectives are achieved, will be driven by logistical matters. Both USAF and USA logistical doctrines place the needed emphasis on the proper orientation towards logistics support.

### The Principle of the Initiative.

OFFENSIVE ACTION IS NECESSARY TO ACHIEVE DESIRED RESULTS AND TO MAINTAIN FREEDOM OF ACTION: Logistics capability requirements must aim at systems that will permit the commander to exercise initiative and impose his will on the enemy to exploit enemy weakness, and to meet unexpected developments (10:3-2).

FM 100-5 states, ALB doctrine is based on securing or retaining the initiative and exercising it aggressively to defeat the enemy. . . . Commanders must plan tactics and logistics concurrently to insure that the tactical scheme of maneuver and fire support are logistically supportable. . . . Army units will fight in all types of operations to preserve and to exploit the initiative. . . . They will maintain the agility necessary to shift forces and fires to the points of enemy weakness (11:2-1; 5-1).

These logistical guidelines fully support the offensive nature of ALB tactical doctrine. Commanders must have logistical support to maintain the initiative required for any successful combat operation. Commanders must have the total combat capability to effectively carry out the requirements of war and the preparation for it. These doctrinal guides provide the emphasis required for such support.

### The Principle of Economy.

SKILLFUL AND PRUDENT USE OF LOGISTICS RESOURCES WILL ENABLE THE AIR FORCE TO ACCOMPLISH ITS MISSION WITH MINIMUM EXPENDITURE OF RESOURCES: This principle requires the measured allocation of available resources on the basis of an established priority system. . . .primary attention must be given to factors which are limiting, significant, or essential to the solution of the objective involved (10:3-3).

FM 100-5 states, " . . .efficiency will be mandatory. Commanders will have to conserve CSS resources, especially ammunition, POL, and repair parts. When capabilities do not meet requirements, commanders must establish priorities for support" (11:5-1).

The resources of war are by nature limited and expensive. Commanders, and in turn the soldiers and airmen responsible for the conduct of war, must be adequately supported. However, economy of resources is essential to maintaining a proper balance. The economy of any nation can not be directed towards military needs and still maintain the vitality to support its other national interests. The military must set the example in its wants and needs. When an imbalance does occur, the military must use its limited resources where they will accomplish the most good. Alternative, prudent approaches may also be better in the long run. Large stockpiles of materiel cause security and transport problems, which may out weigh their benefit. Commanders must be able to accomplish their missions with the resources that are actually required. These doctrinal approaches to the question of economy clearly support this need. The services must ensure that adherence to them is maintained.

### The Principle of Security.

SECURITY IS ESSENTIAL TO THE PRESERVATION OF SUSTAINED COMBAT CAPABILITY. Scarce resources must be protected against loss. The total Logistics system must be secured against any disruption." (10:3-3).

FM 100-5 States, Rear area protection (RAP) operations protect rear areas (division, corps, and echelons above corps) and insure that the support being provided to the main effort is not interrupted. . . .The commander is responsible for ensuring that RAP planning and execution is totally integrated into the command's overall effort (11:14-1; 14-2).

Both services recognize the need to secure the logistics networks. When these networks are not secure, obviously they will be of limited value. The direct link between logistics support and tactical maneuver necessitates the security of both. When either is threatened, the other becomes ineffective. The reality of limited resources is well recognized by USAF and USA logistics doctrine. Equally, each recognize the need to maintain those resources in a secure manner.



### The Principle of Mass.

THIS CAN BE DESCRIBED AS CONCENTRATION OF COMBAT POWER WHERE IT CAN DO THE MOST GOOD. . . Logistics in support of adequate combat power must be concentrated at the critical time and place for a decisive purpose. When the elements of combat power receive the proper combination of support the net result is combat superiority (10:3-4).

FM 100-5 states, "Superior combat power applied at the decisive place and time decides the battle" (11:2-4). " To sustain the momentum that early successes generate, leaders must . . . deploy forces in adequate depth and arrange for timely and continuous combat and combat service support at the outset of operations" (11:2-9).

Both services fully recognize this requirement and their respective doctrines adequately address it. Unsupported combat power is limited in both efficiency and staying power. Each also recognizes that logistics support must be fully integrated into the tactical planning process. Logistics may well be more important than the planned form of maneuver. Even a poor plan has a better chance for success when properly supported.

### The Principle of Integrity of Information.

PLANNING AND CONTROL OF LOGISTICS ARE BASED ON THE KNOWLEDGE OBTAINED THROUGH LOGISTICS AND VARIOUS OTHER INFORMATION SYSTEMS: Many decisions are based on source data including information generated from operation and tactical employment. Therefore, timely and accurate submission is paramount (10:3-4).

FM 100-5 states, "COMMUNICATIONS. The effectiveness of the CSS system depends on adequate communications to keep abreast of changing situations and requirements" (11:5-2).

Commanders are more likely to make good decisions when they have good information. Timely and accurate information is essential to planning and sustaining military operations. Proper information is directly linked with the principle of initiative. The commander must have the ability to influence the action and capitalize on an enemy weakness when it presents itself. Without the necessary logistics input to his courses of action, the commander's ability to influence the battle is reduced. Each service doctrine fully recognizes the importance of logistics information, from the perspective of timeliness and content.

These USAF logistical principles have a direct relationship to ALB tactical execution and are supportive and complementary to USA requirements. USAF's adherence to these principles and the USA's compliance to its own concepts should produce satisfactory logistical doctrine interface. However, each service faces a different challenge from the acquisition aspect of logistics doctrine.

#### Evaluation Findings: Reliability

It is the opinion of this study that each service must place more emphasis on quality and reliability when acquiring military capabilities. This concern is far removed from any immediate impact on ALB doctrine, but it can ultimately impact the capability to execute it. Great strides have been made in developing more ease of maintenance and reducing maintenance requirements. Technology has provided more sophisticated weapon-systems (i.e. F-15, F-16 aircraft and the M1 Tank with its partner Fighting Vehicles, the M2/3 Bradley), but these systems required equally sophisticated support systems. These weapon systems exemplify the growing obsession with high technology. The lesson to be learned and perpetuated is that reliability must also be designed into future systems with the ALB in mind. ALB will demand more operational hours, less or no maintenance due to the expected short duration of conflict and less dependency on sophisticated support requirements (i.e. highly skilled personnel, fixed base maintenance organizations and extensive test equipment).

As General James Mullins, former Commander of Air Force Logistics Command, stated this year,

In fact the single greatest impediment to having real combat capability today is the large and growing logistics requirements of our modern weapon systems. These requirements have resulted in a dependency born of sophisticated, immature technologies. . . a dependency resulting from our fascination with the performance goals at the expense of reliability and supportability. It is a dependency which could well compromise our strategy and tactics and, ultimately, our entire national security policy (3:41).

AFM 400-2 describes two logistics principles which relate to this concern, but do not adequately address it. Those principles are Simplicity and Potentiality. FM 100-5 does not address these concerns specifically, but the essence of the USAF principles is obviously embraced by the USA.

The Principle of Simplicity: MATERIAL EASY TO OPERATE AND MAINTAIN LESSENS PERSONNEL REQUIREMENTS, CONSERVES PHYSICAL AND MONETARY RESOURCES, MINIMIZES TIME AND EFFORT REQUIRED FOR TRAINING, MINIMIZES MAINTENANCE PROBLEMS, AND INCREASES THE PROBABILITY OF SUCCESSFUL OPERATION.

The Principle of Potentiality: EXPLORATION OF TECHNOLOGICAL AND SCIENTIFIC ADVANCES FOR POTENTIAL AIR FORCE PURPOSE CONTRIBUTES TO COMBAT CAPABILITY: (10:3-3).

These principles encourage capitalizing on the benefits of technology and its contributions to combat capability. Technology should logically lead to more reliable

systems. However, the military has become captive to technological advances at the expense of reliability, as related by General Mullins. This results in a vicious, expensive circle of dependency. The less reliable our resources are, the more logistics support they require. Therefore, the larger the resultant support base is, the more likely we are to accept less reliability simply because that support base is there. This dependency on logistics supportability also drives the tactical choices available to the commander. This may be viewed as acceptable depending on your perspective--commander or logistician. Reductions in logistical dependency could result in the redistribution of personnel and other resources into more direct combat capabilities.

Any redefined logistics doctrine must encourage and demand increased reliability from our future acquisitions. Such doctrine must also encourage the modification and improvement of existing systems, also a current logistics function, to gain more reliability. General James Mullins, Commander Air Force Logistics Command, commented on the importance of technology in a recent Military Review article.

But for us to turn our back on technology to simplify and thereby reduce the logistics burden would be the same as chopping off our right hand because our fingers hurt. Technology is our great strength and it gives us the power to defend this nation. . . .I believe we must now step up to the problem, endure the pain and put forth that effort---while we still have the time and resources to do so (3:46).

#### Evaluation Findings: Distribution

The last major component of logistics doctrine relates to the distribution of logistics resources. AFM 400-2 defines the objective of the distribution function as "the efficient, effective and economical distribution of the means procured to support the needs of the user. . . .The distribution element of logistics must be tailored to provide responsive, flexible and mobile support" (10:4-4). FM 100-5 also describes the USA equivalent to the USAF distribution function. It similarly describes the essentiality of transportation, reporting systems, storage and required control measures. However, neither service addresses what could be a major impediment to the successful execution of ALB tactical doctrine. This potential flaw deals with the method of distribution employed by each service. The paramount reliance on joint execution of ALB doctrine is therefore jeopardized by this similar distribution/resupply method.

The concern in point is a pull method of distribution/resupply method. This pull method is perpetuated by the need to closely control and manage limited resources. It is characterized by the dispatch of materiel only upon receipt of a requisition. ALB tactical doctrine is driven by the timeliness of attacking enemy second echelons, deep follow-on forces and the ability of the ground and air commanders to capitalize on all opportunities to attack. The "pull" method of requisitioning material does not allow enough flexibility for any timely execution by the ground and air commanders, without ample warning time. The battlefield environment may not provide this required warning time.

The Warsaw Pact and recently the Israeli Defense Forces employ a push method of distribution/resupply. Their tactical doctrines, like ALB doctrine, require a responsive distribution system which can sustain deep armored and air attacks. Selected

materiel is regularly pushed forward to the committed units without requisitions. This method does require planning considerations regarding what, when, how much and where materiel is pushed forward. It would enhance the ALB commander's ability to react at the critical time required by ALB tactical doctrine. It would also reduce the need for logisticians at all levels and allow the logistics system to focus on the critical shortages. Security of logistics resources is already doctrinally addressed by the services. Also, reduced lines of distribution/resupply and the nearness of logistics resources, to the user, may even enhance Rear Area Protection operations. "Push" distribution/resupply can realistically occur only in wartime. Resource constraints and peacetime expenditure rates would not justify a complete doctrinal adoption. However, Specified and Unified commanders should be empowered to implement such a doctrine, when required. The push system must be tested and used in training exercises to adequately prepare the fighters and the logisticians of each service to properly employ it.

The joint USAF and USA contribution to ALB tactical doctrine can never be overemphasized. Each service has unique logistical requirements, but from a doctrinal standpoint they do complement the execution of ALB. However, doctrine only addresses the broad view. Each service must insure that implementation of its respective logistical doctrine is efficient and continues to support ALB tactical needs. The framework has been built and the services must continue to build on their continued support of ALB tactical doctrine.

This study has developed two logistical doctrine concerns: the need for increased doctrinal emphasis on reliability in the acquisition/modification of military capability and the need for a unique distribution/resupply system for the ALB. Proposed doctrinal changes to these two aspects of logistics doctrine will be addressed in Chapter Five.

## Chapter Five

### PROPOSED ALB LOGISTICS DOCTRINAL CHANGES

National safety would be endangered by an Air Force whose doctrines and techniques are tied solely on the equipment and process of the moment. Present equipment is but a step in progress, and any Air Force which does not keep its doctrines ahead of its equipment, and its vision far into the future, can only delude the nation into a false sense of security (9:4-7). General H. "Hap" Arnold 1945.

The analysis of logistic doctrine, in Chapter Four, disclosed two areas of concern: increased emphasis on reliable military capability and the development of an ALB unique push method of distribution/resupply. This final chapter will attempt to develop proposed doctrinal changes which will possibly offset these concerns.

ALB tactical doctrine will place enormous demands on USAF and USA personnel, equipment and munitions. Intelligence systems may or may not provide adequate warning for the building-up of operational and logistics fighting capability. Therefore, the systems in the field will be called upon to answer the threat. Tactical necessity may preclude scheduled maintenance to attain the current high peace time availability rates. The qualitative, technology-rich approach both services have taken, to deter the Warsaw Pact threat, has also given rise to the ever growing dependency on logistical support. The evolution and subsequent deployment of "do-almost-anything" weapon systems has also resulted in the requirement for increased maintenance times, more repair parts and highly skilled support personnel. It is this dependence which may result in a twofold restriction of our ALB forces. First, the dependence on a large logistics "tail" limits our ability to effectively employ our advanced weapon systems. The aircraft needed for the deep attack and the ground force systems for the first echelon containment can not be tied to logistics bases for unacceptable periods of time. Each will be required to perform for extended periods from the moment of commitment and they must be returned to the fight in short order. Second, support bases and other logistical resources are prime Warsaw Pact targets. Such targets will be among the first attacked and eliminated. The operational arms of ALB doctrine could be seriously hampered by their loss. The operational arms must be able to perform their mission from alternate locations with minimal support. This can only be accomplished when the major weapon systems are reliable and can perform their missions with limited support beyond refueling and rearming. The acquisition process, of both services, should determine reliability parameters based on the ALB environment. Logistics implications must be considered in order to design-in reliability, supportability and maintainability which will allow the needed quick turn around of ALB fighting systems. The 22 May 1984 Memorandum of Agreement (MOA), between the USAF and USA, with its ALB undertones, is a step in the right direction. The MOA addresses the roles of each service in ALB tactical operations and the "requirements" identification to conduct those operations. This realization of working

together on requirements, future weapon systems and tactics will support ALB execution. "Both service chiefs expressed confidence that the MOA will significantly enhance the country's military posture and have a major, positive impact on the way future combat operations are conducted" (6:16).

### ALB Acquisition Doctrine

The acquisition strategy for future military systems must address the environment ALB doctrine will encounter and be called upon to function in. Reliability must actually move up in priority to at least co-equal status with capability and performance. Both services must recognize this requirement and demand these needs from their industrial partners. Such demands and subsequent requirements will only result from a logistical doctrine which encompasses the importance of reliability of acquired military capability. A resultant proposed USAF logistics doctrinal principle for consideration is:

The Principle of Reliability and Quality. RESOURCES MUST BE ACQUIRED WHICH WILL CAPITALIZE ON THE INHERENT BENEFITS OF TECHNOLOGICAL ADVANCES. RELIABILITY AND QUALITY OF PERFORMANCE WILL BE OF CO-EQUAL IMPORTANCE WITH CAPABILITY.

The initial emphasis for such a doctrinal approach has begun at the highest level of the Department of Defense (DOD). The services and DOD must be prepared to pay the ultimate high cost this priority will surely reflect. Reliability is always sought, but true operational reliability is seldom achieved. DOD should incorporate this reliability initiative in its 5000.1 Directive, Major System Acquisition.

FM 100-5, an operational doctrine manual, is not the vehicle for defining logistics acquisition doctrine. But, with modified DODD 5000.1 guidance the USA acquisition programs would similarly reflect the reliability emphasis. It is essential for all organizations responsible for acquiring our nation's military resources to establish requirements, design equipment, contract for and supervise the production of military resources which will support the execution of ALB. They must be innovative and determined, because of the importance of reliability to the successful execution of ALB doctrine.

### ALB Distribution Doctrine

The distribution/resupply of resources is also vital to the execution of our tactical doctrine. USAF and USA weapon systems can quickly become one-shot or extremely limited if they are not promptly resupplied. Their effectiveness is enhanced proportionately to the logistics system's ability to turn them around and return them to the fight. Our ability to convert the peacetime pull logistics system to a Soviet styled push system will never be fiscally possible. However, the concept must be tested and then practiced by those unified and specified commanders most likely to implement it. These commanders must determine the tactical situation which would trigger such a conversion. Their planners and ultimately the DOD must insure the resources are available and positioned to support such a conversion. This is an area which will require a coordinated agreement between the appropriate ground and air commanders. This synergy is essential to the overall support of ALB tactical doctrine. The primary

candidates for initial push distribution/resupply should include: POL, munitions, high-failure rate items, communications related equipment and selected end items with complete crews (aircraft, tanks, artillery, and fighting vehicles). These resources will be pushed forward based on projected usage and loss rates, but without further requisitioning. The appropriate commanders should only direct the location of delivery based on the tactical situation. This system will give the air and ground commanders the flexibility to preposition or maintain continuous support for the battle. It will aid uniformity of load planning and transportation requirements. This flow of materiel to ground attack positions or to a stretch of autobahn turned airfield, will provide a continuous pool of resources to maintain the offensive character required of ALB doctrine. This doctrine will also free many of the personnel resources required to maintain the pull distribution/resupply system. These resources would be available for conversion to the more critical maintenance and munitions personnel requirements.

Both of these doctrinal changes will require a total reorientation by ALB planners and commanders. It is the opinion of this study that, while costly, these changes or added emphases are essential to the successful execution of ALB tactical doctrine. This study also recognizes the need for additional analysis in the area of push resupply, structure of forward support and increased evaluation of logistics doctrine development. The logistical support of the Air Land Battle is possibly the key to success. Leadership, training, esprit and high technology systems can not offset a lack of timely, adequate support. If a war fighting resource does not function it is not a resource. If it does function, but can not be adequately supported, it is of little value to the ALB.



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